

REMARKS

No claims have been amended. Claims 2, 3 and 16 were previously canceled. No new matter has been added to the application.

Claims 1 and 4-15 remain pending in the application. Reconsideration and allowance of all of the claims are respectfully requested in view of the foregoing amendments and of the following remarks.

In regard to the Rejection of Claims 1, 4, 10 and 11 Under 35 U.S.C. § 103(a)

The Examiner rejected claims 1, 4, 10 and 11 under 35 USC 103 (a) as being unpatentable over Barton et al. (US 6,503,432) in view of Fukumura et al. (US5,674,556) and Kim et al. (US 6,403,432). The Applicants respectfully disagree.

Claim 1 defines that the “the moving current collector sheet passes in between the first and third slot die opening”.

Barton et al. disclose two extruded masses forced into an extrusion die 30 and deposited onto a support 40 at location 50. The extruded masses are deposited onto one side of a support or current collector and the current collector sheet does not pass in between a first and third slot die opening. Barton et al. (col. 13, lines 18-20) mentions that: “it is also possible to extrude multilayer structures on both sides of a current collector substrate”. However, it is not explained how to accomplish this. Barton et al. never discloses a single current collector sheet passing in between a first and third slot die opening as defined in claim 1.

With regards to Fukumura et al., referring to lines 6-13 of column 6 describing the embodiments shown in Figs. 7A and 7B:

“Examples of coating apparatus having no backup roll are shown in FIGS. 7A and 7B for reference. The examples show embodiments different from that of the present invention. As is shown in FIGS. 7A and 7B, slot dies 7 and 7 may be placed on opposite sides of the support 1, with a clearance between the

support 1 and them, in which case the slot dies 7 and 7 may be placed in opposition to each other (FIG. 7A), or they may be placed away from each other (FIG. 7B).”

It is apparent that Fukumura et al. disclose a coating process as opposed to an extrusion process as defined in claim 1. The Applicants submit that Fukumura et al. and Barton et al. cannot be combined as one describes a coating process which includes the use of solvent to reduce the viscosity of the material which is later removed, while the other describes an extrusion process without solvent.

A coating process involves an almost liquid paste which is not subjected to the enormous pressure of an extrusion process and the material exiting the coater contains a substantial amount of solvent which must be removed by evaporation. Furthermore, the material exiting the coater does not hold itself together as it does in liquid form. On the other hand, an extrusion process involves a paste or slurry having high viscosity that contains no solvent or almost no solvent. The paste or slurry is mixed and pushed at very high pressure and is self-supporting and is in its final form when exiting the extrusion die.

The dynamics of each process is different and the term “extruding” cannot be broadened to encompass “coating”. Fukumura et al. cannot be used to solve the problems of co-extruding thin sheet of electrode and electrolyte and a person skilled in the art at the time the invention would not look to Fukumura et al. to perfect an extrusion process.

Kim et al. simply disclose a bi-face electrochemical cell assembly and is silent as to a co-extrusion process in which a single current collector sheet is passed in between a first and third slot die opening as defined in claim 1.

Therefore, the Applicants submit that it would not have been obvious to a person skilled in the art at the time the invention was made to arrive at the claimed invention without the hindsight of the present application. As such, the Examiner is requested to withdraw his rejection of amended claim 1 and claims 4, 5, 7, 10 and 11 depending therefrom.

In regard to the Rejection of Claims 5 and 6 Under 35 U.S.C. § 103(a)

The Examiner rejects claims 5 and 6 under 35 USC 103 (a) as being unpatentable over Barton et al. (US 6,503,432) in view of Fukumura et al. (US 5,674,556) and Kim et al. (US 6,403,432) as applied to claims 1, 4, 10 and 11, and further in view of Kobayashi et al. (US6,676,865) or Schock (US3,544,669). The Applicants respectfully disagree.

Kobayashi et al. disclose a molding process of articles with an adhesive and an elastomer and Schock also discloses coating of an adhesive layer followed by a plastic overcoat. In both documents, the processes disclosed do not address the co-extrusion of electrochemical material comprising a plurality of components but either a molding process or coating process.

Furthermore, Kobayashi et al. (Figure 3) and Schock (Figure 2) do not disclose four flow channels and four slot openings as defined in claim 5 but only a pair of flow channels.

Therefore, at least one element of claim 1 and claims 5 and 6 depending therefrom, is not taught by Kobayashi et al. and Schock alone or in combination. The Applicants submit that it would not have been obvious to a person skilled in the art at the time the invention was made using the information disclosed in Kobayashi et al. and Schock to arrive at the claimed invention without the hindsight of the present application. As such, the Examiner is requested to withdraw his rejection of claims 5 and 6.

In regard to the Rejection of Claims 7 - 9 Under 35 U.S.C. § 103(a)

The Examiner rejected claims 7-9 under 35 USC 103 (a) as being unpatentable over Barton et al. (US 6,503,432) in view of Fukumura et al. (US 5,674,556) and Kim et al. (US 6,403,432) as applied to claims 1, 4, 10 and 11, and further in view of Brouwer et al. (US4,260,556) and Morris (US5,316,556). The Applicants respectfully disagree.

Morris discloses subsequent coating steps as opposed to a co-extrusion process and Brouwer et al. disclose subsequent extrusions of annular layer through annular dies as opposed to slot dies as defined in claims 7-9.

Therefore, at least one element of claim 1 and claims 7-9 depending therefrom, is not taught by Brouwer et al. and Morris alone or in combination. The Applicants submit that it

would not have been obvious to a person skilled in the art at the time the invention was made using the information disclosed in Brouwer et al. and Morris to arrive at the claimed invention without the hindsight of the present application. As such, the Examiner is requested to withdraw his rejection of claims 7-9.

In regard to the Rejection of Claims 12-15 Under 35 U.S.C. § 103(a)

The Examiner rejected claims 12-15 under 35 USC 103 (a) as being unpatentable over Barton et al. (US 6,503,432) in view of Fukumura et al. (US 5,674,556) and Kim et al. (US 6,403,432) as applied to claims 1, 4, 10 and 11, and further in view of Applicants' admitted prior art. The Applicants respectfully disagree.

The applicants submit that claims 12-15 are all dependent from amended claim 1, which the Applicants believe is now in condition for allowance. Claims 12-15 are therefore allowable as dependent on an allowable claim.

In view of the above remarks, the Applicants respectfully submit that all of the currently pending claims are allowable and that the entire application is in condition for allowance.

Should the Examiner believe that anything further is desirable to place the application in a better condition for allowance; the Examiner is invited to contact the undersigned at the telephone number listed below.

At the time of filing of the present response, the Office was authorized to charge the fees believed to be necessary to a credit card. In case of any under- or over-payment or should any additional fee be otherwise necessary, the Office is hereby authorized to credit or debit (as the case may be) Deposit Account number 502977.

Respectfully submitted,

/Dominic Goudreault 53915/

Dominic Goudreault, Reg. No. 53,915
OSLER, HOSKIN & HARCOURT LLP
Agent for the Applicant

OSLER, HOSKIN & HARCOURT LLP
1000 de la Gauchetière St. West
Suite 2100
Montréal, Québec H3B 4W5
Canada

Tel. (514) 904-8100
Fax. (514) 904-8101